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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Keiichi Nakatsugawa

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10/28/2005

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EXAMINER

GREY, CHRISTOPHER P

ART UNIT

PAPER NUMBER

2667

DATE MAILED: 10/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/918,271	<b>Applicant(s)</b> NAKATSUGAWA ET AL.	
	<b>Examiner</b> Christopher P. Grey	<b>Art Unit</b> 2667	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 July 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                                    |

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claim 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leung (US 6501746) in view of Chen et al. (US 6842456)

Claim 1 Leung discloses a foreign agent/router communicating with a mobile node (Col 1 lines 39-55).

Leung discloses a mobility-binding table (memory) for storing the current address of a mobile node (see fig 5 and Col 9 line 63- Col 10 line 19).

Leung discloses a router that maps (transfers) a mobile ID (home address) to an IP address, using a care-of address, (Col 11 lines 6-32 and see fig 7), however Leung does not specifically disclose converting the home address destination to a current address destination.

Chen et al. (Chen 'hereinafter') discloses a home agent adapted to remove the home address of the mobile node and replace (convert) it with a foreign agent's care-of address (current address destination) as disclosed in Col 3 line 60- Col 4 lines 4.

Therefore it would have been obvious to one of the ordinary skill in the art at the time of the invention to combine the mobility binding table as memory as disclosed by

Leung, with the function of as disclosed by Chen. The motivation for this combination is to effectively transmit a packet to an updated (current) address (Col 2 lines 30-35).

Claim 2 Leung discloses a foreign agent (router and registering means) that sends a registration request (notification) to a home agent in order to register the home address and current address of a mobile node when an update is necessary (Col 3 lines 6-12 and see fig 8).

Leung discloses the registering and updates occurring within a mobility binding table (memory, Col 9 line 63- Col 10 line 19).

Claim 3 Leung discloses a home agent router accommodating a mobile node at a home address (Col 3 lines 15-24).

Leung discloses a foreign agent (router and registering means) that sends a registration request (notification) to a home agent in order to register the home address and current address of a mobile node when an update is necessary (Col 3 lines 6-12 and see fig 8).

Leung discloses the registering and updates occurring within a mobility binding table (memory (Col 9 line 63- Col 10 line 19).

Claim 4 Leung discloses a home agent router communicating with a mobile node (Col 1 lines 39-55).

Leung discloses a home agent router that receives a registration request (notification). Leung also discloses within the home agent a mobility binding table that is updated upon each request (Col 9 line 63- Col 10 line 19)

Leung discloses the home agent router sending a registration reply (notification) to a foreign agent/router (Col 8 lines 5-24).

Claim 5 Leung discloses a care-of address being associated with a current address, and the registration request (notification) updating a mobility-binding table (Col 9 line 63- Col 10 line 19). Leung does not disclose a corresponding node supporting IPV6.

Chen et al. (Chen 'hereinafter') discloses a correspondent node (see fig 1 element 10). Chen also discloses a non-encapsulation mobile IP supporting IPV6 (Col 3 lines 17-21), where it would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the nodes and routers as disclosed by Leung, to support IPV6 as disclosed by Chen in order to support quality of service standard translation techniques (Col 3 lines 17-21).

Claim 6 Leung discloses a home agent authenticating a mobile node (Col 13 line 52- Col 14 line 5).

Leung also discloses sending a registration reply (binding acknowledgement) from the home agent router to the mobile node (Col 8 lines 5-20).

Claim 7 Leung does not disclose the transfer means forming an IPV6 routing header describing said home address in a packet when transferring the packet from the correspondent node to the mobile node.

Chen discloses a non-encapsulation mobile IP supporting IPV6 (Col 3 lines 17-21) as disclosed in the rejection of claim 5. Chen also discloses modifying (transferring)

an IP packet's home address by replacing it with a foreign agent care-of address (Col 2 lines 37-50).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the nodes and routers as disclosed by Leung, to support IPV6 and remove and replace a home address with a current address as disclosed by Chen in order to support quality of service standard translation techniques (Col 3 lines 17-21) and transmit a packet effectively to an updated address.

Claim 8 Leung does not disclose the transfer means IP in IP encapsulating and transferring the packet by an IPV6 header, including a current address when transferring the packet from a correspondent node to a mobile node.

Chen discloses transferring a packet from a correspondent node to a mobile node (see fig 1). Chen discloses the conventional encapsulation technique known as IP in IP encapsulation (Col 2 lines 15-29).

Chen discloses a mobile IP supporting IPV6 (Col 3 lines 17-21) as disclosed in the rejection of claim 5.

Chen also discloses modifying (transferring) an IP packet's home address by replacing it with a foreign agent care-of address (Col 2 lines 37-50).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the nodes and routers as disclosed by Leung, to support IPV6 and remove and replace a home address with a current address as disclosed by Chen in order to support quality of service standard translation techniques (Col 3 lines 17-21) and transmit a packet effectively to an updated address.

Claim 9 Leung discloses a foreign agent (node adapted router) that sends a registration request (notification) to a home agent in order to register the home address and current address of a mobile node when an update is necessary (Col 3 lines 6-12 and see fig 8).

Leung discloses a care-of address being associated with a current address, and the registration request (notification) updating a mobility-binding table (Col 9 line 63- Col 10 line 19).

Leung does not disclose the mobile node supporting the IPv6 protocol and an extension header.

Chen discloses a mobile IP supporting IPV6 (Col 3 lines 17-21). Chen also discloses adding a care-of address to a header (Col 2 lines 37-50).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the nodes and routers to support IPV6 as disclosed by Chen in order to support quality of service standard encapsulation techniques (Col 3 lines 17-21).

Claim 10 Leung discloses a home agent authenticating a mobile node via a foreign agent (mobile node adapted router) (Col 14 lines 6-11).

Leung discloses authentication being performed using a Home address which is typically a part of the header information (Col 13 line 52- Col 14 line 5).

Furthermore authentication involves obtaining (calculating) a care-of address that is inserted within the header (Col 14 lines 6-11, and see Col 14 lines 37-49).

***Response to Arguments***

2. Applicant's arguments filed July 29, 2005 have been fully considered but they are not persuasive.

(a) The applicant argued that the cited art does not disclose the applicant's claimed, "storing a current address of said mobile node which should be stored by a correspondent node of the packet communication in place of the correspondent node."

The examiner maintains that the same limitation in its broadest term is already discussed in the rejection of claim 1, wherein Leung discloses storing a current address of a mobile node within a mobility binding table within a Home agent, where a corresponding node accesses the home agent in order to retrieve the current location of a mobile node (see col 2 lines 22-46). The home agent is a router, and contains a memory for storing a current address of a mobile node (care-of address). The correspondent node does not have to store this address because it simply accesses a home agent in order to route information to a destination.

(b) The applicant argued that the cited art does not disclose the applicant's claimed, "a current address" and a change of the current address due to movement of the mobile node".

The examiner maintains that the same limitation in its broadest term is already discussed within the rejection of claim 4, wherein Leung discloses a home agent updating the mobility binding table within with an updated care of address, and



furthermore, a foreign agent router updating a visitor table with identification information of the mobile node's new location (Col 2 lines 4-21).

### ***Conclusion***

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

(a) Johansson et al. (US 2002/0080752) discloses an invention that describes a route optimization technique while transferring a packet from a correspondent node to a mobile node. The invention describes network address translations, a foreign agent (mobile node adapted router) and using a care-of address to identify the current location of a mobile node.

(b) Short et al. (US 6130892) discloses a nomadic router/translator that enables a portable terminal (mobile node) to be connected to a home network (home agent). The router allows for a translation depending on the location of a portable terminal.

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**4. THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher P. Grey whose telephone number is (571)272-3160. The examiner can normally be reached on 6:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on (571)272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Christopher Grey  
Examiner  
Art Unit 2667

C. Grey  
10/25/09



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10/26/05